

SPINAL CORD INJURY



It is vital to carry out motor **and** sensory examinations as the patient may have motor damage without sensory damage, and vice versa.

SENSORY EXAMINATION

The level at which sensation is altered or absent is the level of injury.

Examine the patient with light touch and response to pain. Use the forehead as a guide to what is normal sensation. When conducting the examination, ensure you check both upper limbs and hands, and both lower limbs and feet.

T4 examination must be carried out in the mid-axillary line and not the mid-clavicular line, as C2, C3 and C4 all provide sensation to the nipple line.

MOTOR EXAMINATION

Upper limb motor examination:

- | | |
|-----------------------|----|
| 1. shrug shoulders | C4 |
| 2. bend elbows | C5 |
| 3. push wrist back | C6 |
| 4. open / close hands | C8 |

Lower limb motor examination:

- | | |
|-------------------|---------|
| 1. flex hip | L1 & L2 |
| 2. extend knee | L3 |
| 3. pull foot up | L4 |
| 4. push foot down | L5 & S1 |

For thoracic and abdominal motor examination, look for activity of the intercostal and abdominal muscles.

DIAGNOSIS OF SPINAL CORD INJURY IN THE UNCONSCIOUS PATIENT

1. look for diaphragmatic respiration – a quadriplegic has lost the use of intercostal muscles and relies on the diaphragm to breathe
2. flaccid limbs
3. loss of response to painful stimuli below the level of the lesion
4. loss of reflexes below the level of the lesion
5. erection in the unconscious male
6. low BP (systolic less than 100mmHg) associated with a normal pulse or bradycardia indicates that the patient MAY be a quadriplegic